John Dowd
Senior Research Analyst
Sanford C. Bernstein & Co., LLC

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Testimony Before the
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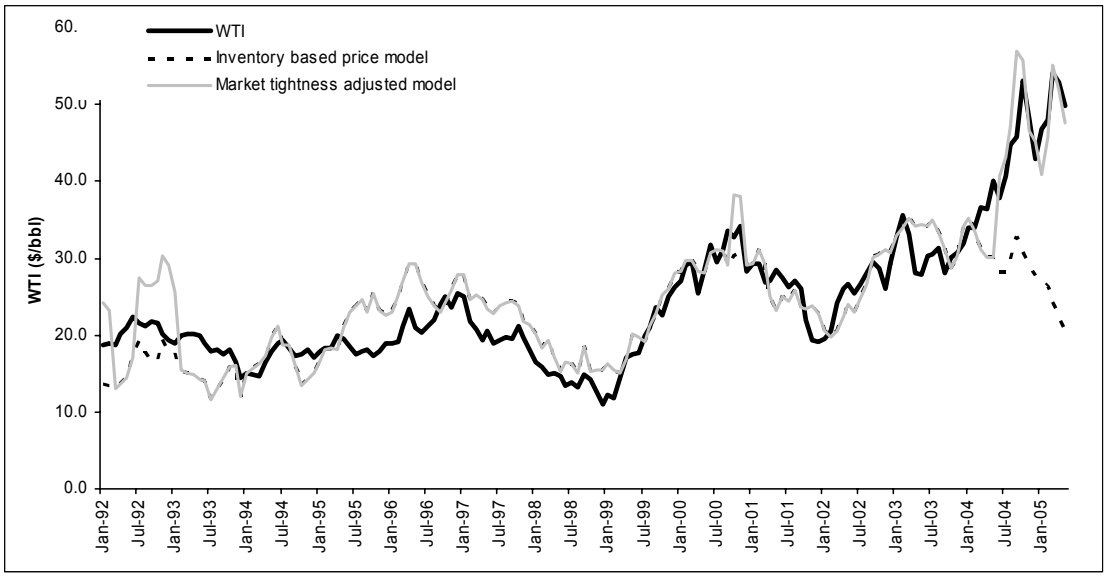
Subcommittee on International Terrorism and Nonproliferation

Good afternoon, I would first like to thank you for the opportunity to speak today.

The risk of a supply disruption in the oil markets appears to be at one of the highest levels in history, primarily because of the thin cushion of spare capacity. With limited spare oil producing capacity, even a relatively small disruption in supply would cause shortages. This has caused oil to trade at a premium to expectations based on inventory levels, a premium described as either a "terror premium" or a "risk premium" by participants in the markets.

This premium appears to be directly proportional to the amount of spare productive capacity held in reserve. If there were 6 million barrels per day of idle capacity, no single terrorist act would be sufficient to cause a shortage. The risk premium would be low. However, with only 2.2 million barrels per day of spare capacity, which is enough capacity to meet a little more than one year of demand growth, the oil markets are the mercy of political stability in Venezuela, Nigeria, and Iraq, as well as potential terrorist acts. The price of oil today is between the cost of producing it, and the $100 price (in real terms) witnessed in the past during shortages. In effect, the market is factoring in some probability that a shortage will occur at some point in the future. We have included an exhibit that presents the crude price versus expectations based on inventories, and also the crude price versus expectations based on the Bernstein Oil Market Tightness Model. In this model, we gauge risk by monitoring the ratio of spare oil capacity to demand growth.

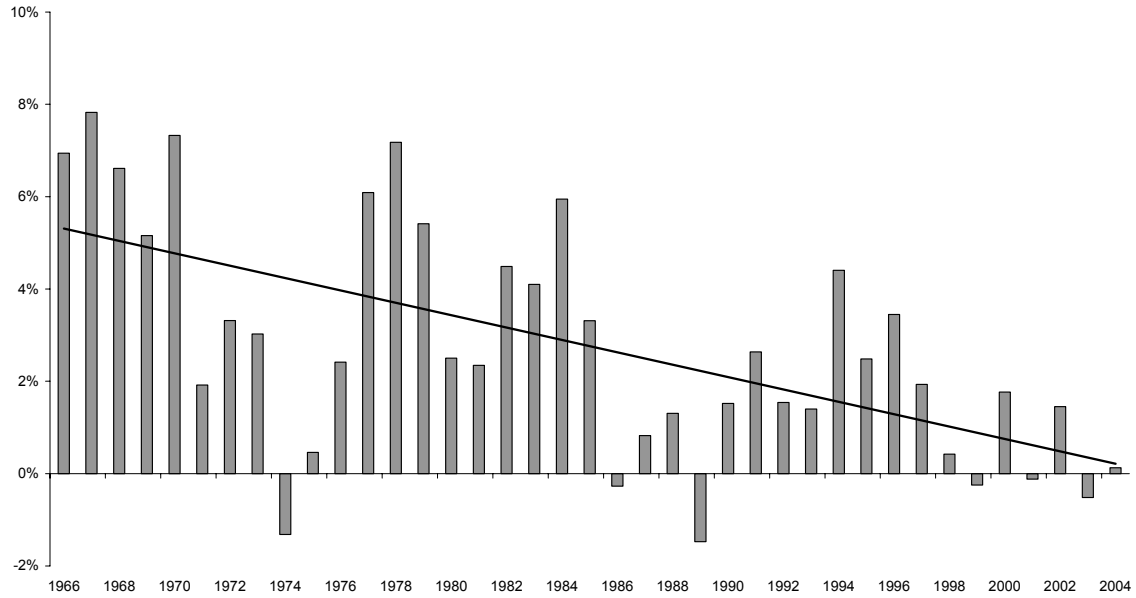


Source: IEA, DOE, Bloomberg

In theory, the solution is simple. If we increase the amount of spare capacity, we will reduce the risks that terrorist actions pose to the crude markets, and crude oil prices will ebb as a result. In practice, there are several complicating factors that will likely inhibit an effective supply-side or demand-side solution.

On the supply-side, the primary concern stems from the inability of non-OPEC producers to materially increase production. The supply response to higher oil prices has been anemic. Over the past two decades, the working assumption has been that oil prices could not permanently move above $25 because doing so would invite a non-OPEC production response. However, despite record investment, we have yet to see any significant production response. To the contrary, production growth from countries outside of OPEC and the Former Soviet Union has declined each decade over the past five. In the 1970's, these countries grew production 3.1% annually. Over the past decade, they grew production only 1.1% annually, even though investment was considerably higher.

Non-OPEC Production Growth (Excluding the Former Soviet Union)

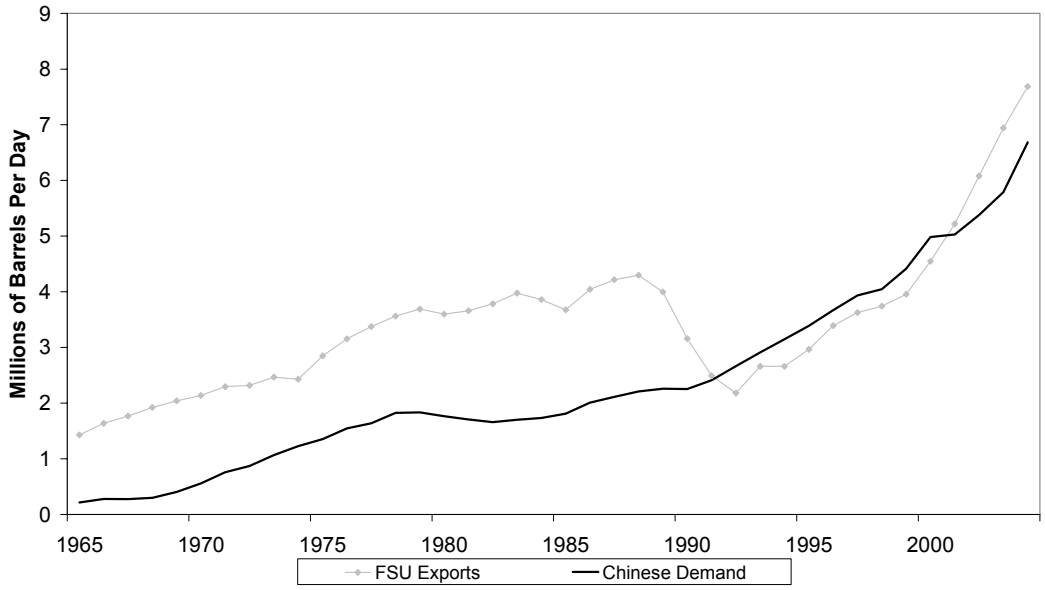


Source: BP Statistical Review 2005

It is also becoming apparent that the hoped for oil supply response will be impeded by a lack of necessary equipment. Today, there are only 5 competitive offshore drilling rigs that are idle and capable of going to work tomorrow. For context, there are 421 that are drilling. Going forward, the oil services industry is only investing enough to expand offshore rig capacity at a rate of 3% per year. The difficulty in expanding capacity at a faster rate is that requires 3-5 years to build a modern offshore drilling rig, and between $150 million and $500 million depending on the type of equipment.

Spare oil capacity will likely dwindle further as a consequence of Chinese demand. While all of the growth in Chinese oil demand over the past decade has been offset by increased exports from the Former Soviet Union, this does not appear likely going forward. Russian production growth stopped last September. This is potentially a game changing event that will only accentuate the sensitivity of the oil markets to terrorist attacks.

Former Soviet Union (FSU) Export Growth Versus Chinese Demand Growth



Source: BP Statistical Review 2005

Finally, the risk of disruptions will likely grow as the global oil supply is increasingly sourced from unstable regions. Throughout history, oil companies have taken a very rational approach to investment, in which they have weighed political risk against geologic risk when deciding where to develop oil. One consequence is that the industry increasingly has demonstrated a propensity to invest in politically risky areas, because the world's oil basins have matured and the geologic risks have increased. As highlighted by the *Oil ShockWave* simulation, the price of oil in the US is highly dependent on developments far outside of our borders.

What is particularly worrisome is that it is not obvious that a material supply response is possible. If the US natural gas market proves to be an analog, there are reasons to be concerned. The number of drilling rigs searching for natural gas has doubled since 1996. Since that time, US natural gas production has not changed.

If oil demand continues to grow faster than supply, the amount of spare capacity will shrink further and the oil markets will likely become even more sensitive to potential disturbances. For instance, if global oil consumption grows at a pace of 3.1% next year rather than current expectations of 2.1%, the amount of surplus capacity will be 830,000 barrels per day less than the current forecast. This is larger than the impact of the Nigerian disruptions sited in the first *Oil ShockWave* scenario.

The Energy Bill of 2005 begins to address our dependency by promoting a diversification of the energies we consume. New nuclear facilities and the increased consumption of renewable fuels will help. The developing technologies promoted by the Bill are also promising, but are unlikely to make a meaningful impact in the near to medium term. New refineries on former military sites would reduce dependence on gasoline imports, but would only act to stimulate oil imports. Furthermore, new LNG

regassification will change the type of hydrocarbon imported, but not the country of origin, the amount, or the price (given the existing competition between oil and natural gas). By the end of the decade, roughly half of LNG liquefaction will be located in OPEC countries.

It is relatively easy to narrow down where our oil dependency lies in the US: transportation. Meaningfully reducing demand for transportation fuels is the only realistic way of gaining greater energy independence in the US. The challenge is that the obvious solution, encouraging the use of diesel fuels and the use of more fuel efficient vehicles, is also politically the most difficult. However, the potential is huge. Improving the average fuel efficiency of the US vehicle fleet by just 2 mpg would reduce US gasoline demand by roughly 1 million barrels per day. This is equivalent to all of the growth in US gasoline consumption over the past 8 years.

In conclusion, the "terror premium" embedded in the crude price is a function of the amount of spare oil capacity. Any event that acts to reduce the amount of spare capacity would likely force crude oil prices even higher. The solution appears to be a combination of policies that simultaneously diversify the fuels the US consumes, increases the supply of these fuels, and reduces consumption.

Thank you.